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09/476,241	12/30/1999	TAKAHIRO KIMOTO	P/1909-122	7511

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EXAMINER

AN, SHAWN S

ART UNIT PAPER NUMBER

2613

7

DATE MAILED: 10/02/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.
09/476,241

Applicant(s)
Takahiro Kimoto

Examiner
Shawn An

Art Unit
2613



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE three MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Jul 22, 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453-O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 12, and 14-18 is/are rejected.
- 7) ☒ Claim(s) 6-11 and 13 is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____ 6) ☐ Other: _____

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DETAILED ACTION

Response to Amendment

1. As per Applicant's instructions in Paper 5 as filed on 7/22/03, claims 1, 5, and 12 have been amended, and claims 14-18 have been newly added.
2. Applicant's arguments with respect to claims 1-5 and 12 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371© of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

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4. Claims 1, 5, and 14-18 are rejected under 35 U.S.C. 102(e) as being anticipated by Matsumura et al (6,125,144).

Regarding claims 1, 5, and 14-18, Matsumura et al discloses a moving picture encoding apparatus, comprising:

block significance determining means (Fig. 6, 304) for determining block significance for each block as an encoding unit of the input image signals according to predetermined evaluation indices;

map generating means (Fig. 1, 106) for generating a refresh map signal representing priority of refresh for each block;

adaptive refresh signal generating means (107) for referring to refresh priority by the map signal and an allowed number of blocks for refresh processing in a frame to be encoded, and generating a refresh signal for the block; and

moving picture encoding means (102) for generating the block information of an error between frames and a quantity of motion generated during block encoding operation for conducting an intra-frame encoding operation for a block specified by the refresh signal and executing an intra-frame encoding operation or an inter-frame encoding operation for a block not specified by the refresh signal (col. 7, lines 8-19).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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6. Claims 2-4 is are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsumura et al (6,125,144).

Regarding claims 2-4, Matsumura et al discloses block feature calculating means for calculating a block feature which is a quantity indicating a variance of intra-block signals (304); and significance generating means for comparing block feature with one or more threshold value and thereby generating block significance for each block (col. 12, lines 39-49).

Furthermore, the Examiner takes official notice that calculating signal distribution of the block and a visual characteristic (luminance) of the block, and band pass filter is conventionally well known in the art.

Therefore, it would have been obvious to calculate signal distribution of the block and the visual characteristic (luminance) of the block to generate the block significance, and calculate the block feature by passing intra-block signals through the band pass filter to attenuate undesirable high frequencies.

7. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Matsumura et al (6,125,144) in view of Ohki (4,651,206).

Regarding claim 12, Matsumura et al discloses a moving picture encoding apparatus, comprising:

block significance determining means (Fig. 6, 304) for determining block significance for each block as an encoding unit of the input image signals according to predetermined evaluation indices;

map generating means (Fig. 1, 106) for generating a refresh map signal representing priority of refresh for each block;

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adaptive refresh signal generating means (107) for referring to refresh priority by the map signal and an allowed number of blocks for refresh processing in a frame to be encoded, and generating a refresh signal for the block; and

moving picture encoding means (102) for generating the block information of an error between frames and a quantity of motion generated during block encoding operation for conducting an intra-frame encoding operation for a block specified by the refresh signal and executing an intra-frame encoding operation or an inter-frame encoding operation for a block not specified by the refresh signal (col. 7, lines 8-19).

Matsumura et al fails to disclose refresh history determining means for temporarily keeping therein the refresh map signal referring to history of the refresh map signal.

However, Ohki teaches conventional refresh history determining means (Fig. 4, 21) for temporarily keeping therein the refresh map signal referring to history of the refresh map signal.

Therefore, it would have been obvious to a person of ordinary skill in the relevant art employing a moving picture encoding apparatus as taught by Matsumura et al to incorporate refresh history determining means as taught by Ohki for temporarily keeping therein the refresh map signal referring to history of the refresh map signal in order to improve the overall quality of the video images.

Allowable Subject Matter

8. Claims (6-11) and 13 are objected to as being dependent upon a rejected base claims 1 and 12, respectively, but would be allowable:

if any one of claims 6-11 are rewritten in independent form including all of the limitations of the base claim 1 and any intervening claims; and

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if claim 13 is rewritten in independent form including all of the limitations of the base claim 12 and any intervening claims.

Dependent claims 6-11 recite the novel feature of means wherein the block significance determining means includes:

block feature calculating means for calculating for each block a quantity representing a feature of signal distribution of the block and a visual characteristic of the block;

first significance generating means for comparing the block feature with one or more threshold values and thereby generating first block significance for each block;

visual deterioration calculating means for calculating for each block, a quantity of visual deterioration representing a degree of visual picture deterioration when a forecast error signal is lost;

second significance generating means for comparing the quantity of visual deterioration with one or more threshold values and thereby generating second block significance for each block;

block significance totaling means for combining the first block significance with the second block significance and supplying resultant block significance to the map generating means.

Dependent claim 13 recites the novel feature of means wherein the refresh history determining means includes:

a map history memory for referring to the refresh map signal from the map generating means and the refresh signal from the adaptive refresh signal generating means, thereby updating history, beginning at a start of encoding processing, of a refresh map, and storing therein the refresh map;

a refresh signal history memory for storing therein history of the refresh signal;

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a map modifying section for referring to the map history stored in the map history memory and the refresh history stored in the refresh signal history memory and thereby modifying forced refresh priority indicated by the refresh map signal from the map generating means.

The art of record fails to anticipate or make obvious the novel feature as specified in these dependent claims. Accordingly, if the amendments are made to the claims listed above, and if rejected claims are canceled, the application would be placed in condition for allowance.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

A) Chida (6,313,863 B1), Image communication apparatus and system.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shawn An whose telephone number (703) 305-0099 and schedule are Tuesday through Friday.


SSA

September 25, 2003